

REMARKS

In the Office Action of October 20, 2004, the Patent Office rejected claims 8-15 under 35 USC §103 as being unpatentable over U.S. Patent No. 5,367,378 to Harding et al. in view of the article by Pirlet et al. Specifically, it is the Examiner's position that although Harding et al. does not disclose the hot metal strip, it would have been obvious for one of ordinary skill in the art to introduce the method of measuring the shape of a hot metal strip, as taught by Pirlet et al., in a non-contact system for measuring the hot strip flatness, as both of these two references are "solving the same problem of measuring the metal strip (Office Action, page 3)."

Submitted herewith is the Declaration of Dr. Ulrich Müller, a named inventor in the present application and an individual of skilled in the art, with an understanding of rolling mill control systems and the unique challenges presented thereby. In his Declaration, Dr. Müller explains why one of skill would not have considered Harding et al. relevant to the problem of measuring the flatness of a hot metal strip. For the sake of brevity, the reasons will not be detailed here, and instead the Examiner's attention is directed to the Declaration, which is hereby incorporated by reference.

Applicants respectfully traverse the Examiner's rejection and submit that, in fact, it would not have been obvious to introduce the moving hot metal strip into the system of Harding

et al. in order to measure the flatness of the metal strip. The two systems represented by the Harding et al. patent and the article by Pirlet et al. (and the previously cited Bullock reference) represent two fundamentally different measurement systems. Because of the nature and the characteristics of the hot metal strip being used in, for example, Applicants' system, one of ordinary skill in the art would not have been led to the Harding et al. reference.

First, as pointed out by Dr. Müller, because the metal strip being measured is, in fact, hot, and unlike Harding et al., not reflective, projecting and evaluating the line patterns on the hot metal strip would not have been something that one of ordinary skill in the art would have thought possible. To suggest otherwise is to employ the impermissible "obvious to try" approach to obviousness.

Second, because metal strips contain many irregularities, which appear as random darkened areas on the surface of the strip, projecting a line pattern of the type used in Harding et al. would have been considered difficult by one or ordinary skill.

Third, while the Examiner has indicated that it would have been obvious to employ a moving system into the stationary system disclosed in Harding et al., in fact, there are several reasons why this is not the case. As pointed out in the attached Declaration of Dr. Müller, measurement of a reflective

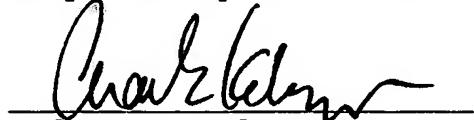
surface as described in Harding et al. requires that the object be stationary and, therefore, would have led one away from using such a system on a moving strip.

Finally, as pointed out by Dr. Müller in his Declaration, the Harding et al. system and a moving hot metal strip measurement system are not necessarily interchangeable.

In short, Harding et al., on the one hand, and Pirlet et al. and, for example, Bullock on the other hand, are not analogous prior art, and one of ordinary skill in the art would not have been motivated to combine these, absent the use of hindsight. For these reasons, Applicants respectfully submit that the claims are allowable over the combination of Harding et al. and Pirlet et al..

Accordingly, reconsideration and allowance of the claims are respectfully requested.

Respectfully submitted,



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